

UNIVERSAL BASIC INCOME – A MACROECONOMIC APPROACH

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WHAT IS UNIVERSAL BASIC INCOME?

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ChatGPT



Examples

"Explain quantum computing in simple terms" →

"Got any creative ideas for a 10 year old's birthday?" →

"How do I make an HTTP request in Javascript?" →



Capabilities

Remembers what user said earlier in the conversation

Allows user to provide follow-up corrections

Trained to decline inappropriate requests



Limitations

May occasionally generate incorrect information

May occasionally produce harmful instructions or biased content

Limited knowledge of world and events after 2021

Could you please define Universal Basic Income for me?



WHAT IS UNIVERSAL BASIC INCOME?

Sure, Universal Basic Income (UBI) is a social welfare system in which every citizen of a country or region is provided with a regular, unconditional cash payment, regardless of their employment status or income level. The basic idea behind UBI is to provide a safety net for everyone to meet their basic needs such as food, shelter, and clothing. The amount of money provided under UBI may vary from country to country, but it is generally sufficient to cover basic needs.



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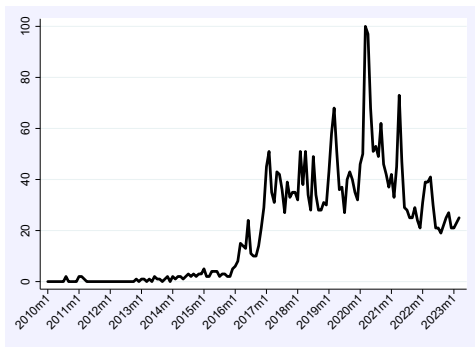


FIGURE: Google search for "Universal Basic Income"

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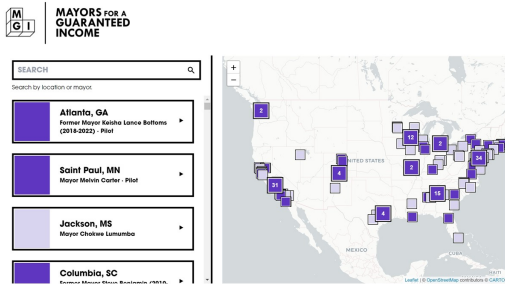


UBI KEY TRADE-OFFS

- UBI provides a safety net for everyone.
- Potentially, less distortive than classical welfare (we will get back to that).
- Very costly → could require dramatic changes to taxation.

MANY RECENT SMALL-SCALE UBI PILOTS

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Leaves many open questions:

- How UBI could be funded and what are the macro implications?
- How would UBI interact with other forms of government assistance?
- When we measure up the costs and benefits – is UBI welfare improving?

Universal Basic Income: Inspecting the Mechanisms

Nir Jaimovich (UCSD)

Itay Saporta-Eksten (TAU)

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Yaniv Yedid-Levi (IDC)

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 - **Insurance role:** incomplete markets with self-insurance, individual productivity & employment shocks.
 - **Policy side:** detailed modeling of existing public insurance programs funded by labor and capital distortionary taxation.

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 - **Policy side:** detailed modeling of existing public insurance programs funded by labor and capital distortionary taxation.
- Three alternative implementations:
 - Funded at current progressivity.
 - Increased progressivity.
 - Partially substitute other welfare programs.

TAKING THE MODEL TO THE DATA

- Key labor market parameters calibrated to match data from the CPS and ASEC 2000-2019.
- Main sample restricted to ages 18-65 excluding armed forces.
- Exclude three groups not in the labor force, which are unmodeled:
 - Students (everyone out of the LF under 25).
 - Retirees below the age of 65.
 - Married not in the labor force, not receiving social assistance.to the labor market.
- The high labor force participation implied by this sample (0.9) choice mitigates the costs associated with the UBI (b/c implies a low dependency ratio).

BENCHMARK THE MODEL USING EMPIRICAL MICRO ESTIMATES

- The Alaska Permanent Fund Dividend:
 - Starting 1982, Alaskans get yearly dividend payment from the fund.
 - As UBI: universal, unconditional, permanent but **not funded by taxes**.
- Jones and Marinescu (2022) find a decline of **less than 1 p.p** in full time equivalent labor supply (accounting for part-time work effect).
- **Keeping taxes constant** in our model, gives **~ 0.5 p.p** decline in employment.



MODEL FIT - WEALTH DISTRIBUTION

- The model reasonably accounts for key wealth-distribution moments.
- Lower two quintiles, who benefit the most of UBI, are matched well.

	Data	Model
<i>% share owned by</i>		
Q1	-0.2	<0.05
Q2	1.2	1.5
Q3	4.6	7.4
Q4	11.9	21.5
Q5	82.5	69.5
Gini	0.78	0.68

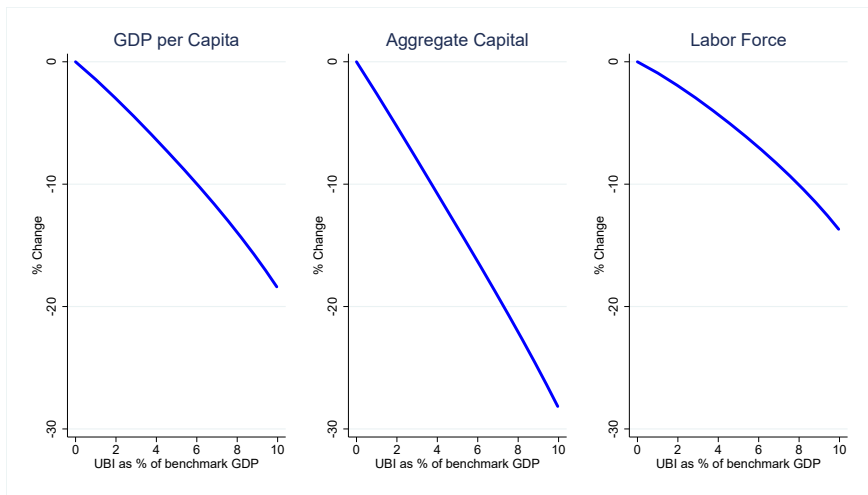
Note: The table presents the share of aggregate wealth owned by quintiles of the wealth distribution both for the data (data source: Table 1 of Krueger, Mitmal and Perri 2017 HB) and our model economy. Further more, it reports the Gini coefficient of the wealth distribution.

THE POLICY EXERCISES

- We conduct hundreds of policy exercises, changing UBI, the tax scheme, and other welfare programs:
 - ① Keeping progressivity and social assistance fixed.
 - ② Changing the progressivity of the tax system.
 - ③ Substitute some welfare programs with UBI.
- Recalculate the steady state equilibrium allocations and prices.
- Present results in deviations from the benchmark economy.

KEEPING PROGRESSIVITY AND SOCIAL ASSISTANCE FIXED

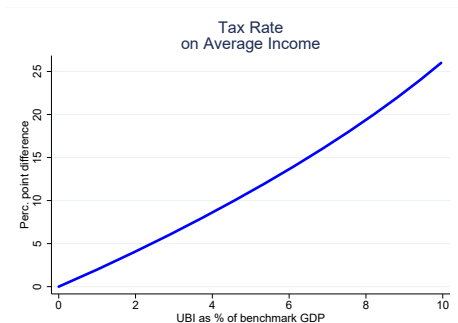
GDP FALLS DRAMATICALLY WITH UBI



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Labor tax rate pushes workers outside the labor force (substitution).
- 2 **UBI provides public insurance:**
Less demand for insurance reduces. aggregate capital (insurance).
- 3 **Positive income effect:**
More people stay outside of the labor force (income).

Capital Labor Complementarity

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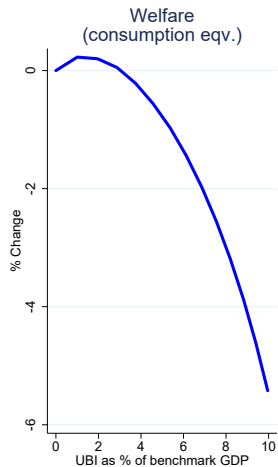
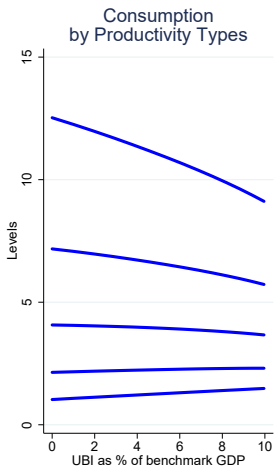
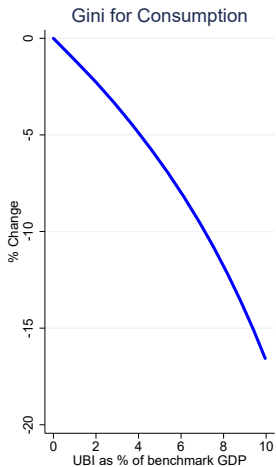
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Capital Labor Complementarity

WELFARE



welfare calculation

CAN WE MITIGATE THE NEGATIVE EFFECT ON OUTPUT?

Taking Stock

- Financing cost UBI explains about 2/3 of the impact.
- Labor tax rate pushes workers outside the labor force (substitution).

How to mitigate this effect?

- 1 A more progressive tax system: [details](#)
 - A stronger incentive to participate in the labor force.
 - But, less need for insurance, further lowering the demand for capital.

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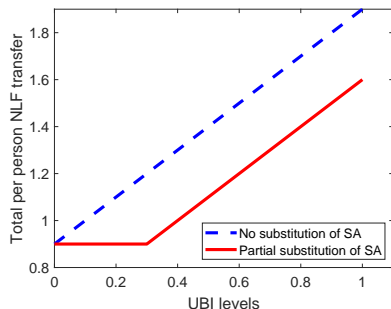
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- 2 Substituting some welfare programs with UBI.

SUBSTITUTING OTHER PROGRAMS BY UBI

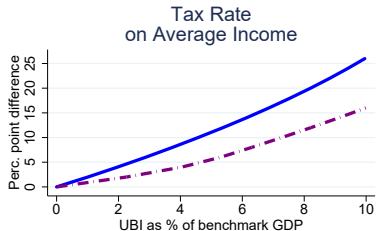
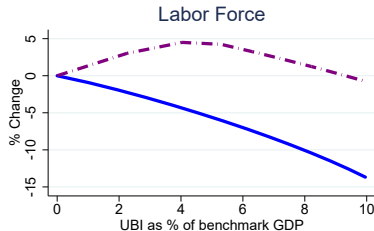
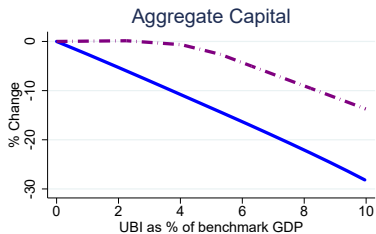
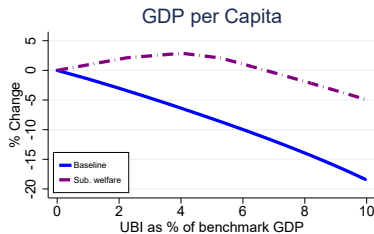
UBI substitute only "welfare oriented" programs (about a 1/3 of income outside the LF):



Implications:

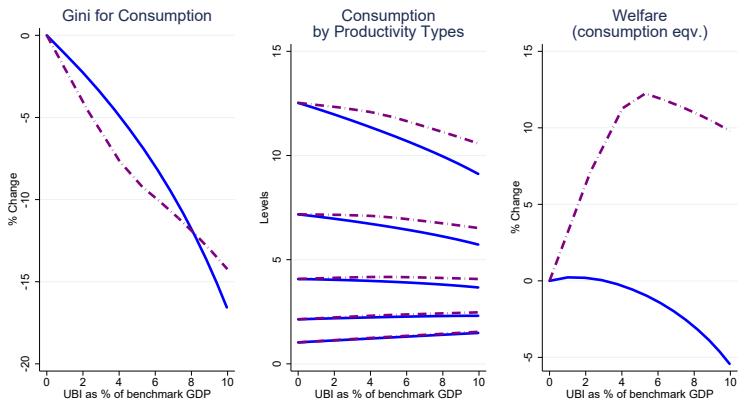
- **Within** the labor force: UBI provides more insurance (as before).
- **Outside** the labor force and below the cap: transfers are constant, but (holding wages constant) UBI increases returns when in the labor force.

SUBSTITUTING FOR WELFARE PROGRAMS, UBI CAN INCREASE LF PARTICIPATION



SUBSTITUTING FOR WELFARE PROGRAMS, MODERATE LEVELS OF UBI CAN INCREASE WELFARE

- For moderate levels of UBI:
Increased Resources + Increased Insurance = Higher Welfare



THE KEY TAKEAWAYS

Holding constant progressivity and welfare programs:

- A large decline in labor force participation, capital, and output.
- Reduced inequality and increased consumption at the very bottom does not compensate for the high cost → welfare declines.
- Three main channels (by importance):
 - ① Increased taxation lowers labor force participation (**substitution**).
 - ② Reduced demand for self insurance decreases capital (**insurance**).
 - ③ The grant lowers labor force entry (**income**).

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More progressive tax schemes:

- Mitigates labor force decline and consequently impact on output.

Partially substitutes welfare programs:

- A modest level of UBI increases LF and can be welfare enhancing.